UAPs and UFOs - The Inter-Terrestrial Aliens Hypothesis (ITH)

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There have been many recent discussions in government and an academic paper about plasma-based UAPs (Unidentified Aerial Phenomena) and UFOs (Unidentified Flying Objects). The public generally assumes that these relate to extra-terrestrial aliens. However, the dark plasma hypothesis, proposed by Jay Alfred in 2005, theorizes that *most* of these encounters are with inter-terrestrial aliens from a parallel Earth composed of low-density self-interacting dark (matter) plasma. It is a co-rotating tenuous dark matter planet gravitationally coupled to the earth. According to this hypothesis, terrestrial dark plasma lifeforms evolved in this sister planet. The sporadic interactions with what appear to be plasma-based UAPs, and UFOs are with these plasma life forms (or "biological UFOs") and holographic projections from advanced civilizations of plasma lifeforms in this parallel Earth. This paper explains the approach and theoretical framework taken by the dark plasma inter-terrestrial aliens' hypothesis with respect to UAPs and UFOs.

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Dark Plasma Hypothesis - Fundamentals

Before analyzing anecdotal evidence from various sources, it is essential to establish a clear scientific framework. A robust theoretical model provides the necessary principles and mechanisms to interpret observational data consistently across different cultural contexts. This section details some aspects of the author’s Dark Plasma Hypothesis (proposed in 2005 in a

popular format and subsequently in 2009 as a peer-reviewed paper). (If you are already familiar with the hypothesis, you can skip to the next section below entitled “Extra-Terrestrial Hypothesis (ETH) – The Most Improbable Explanation” on page 12.) The Inter-Terrestrial Hypothesis (ITH) presented in this paper is a corollary of the much larger Dark Plasma Hypothesis.

Dark Earths

According to this hypothesis, a significant proportion of dark matter in the vicinity of ordinary matter is in the state of a complex, self-interacting plasma. The dark plasma near earth is theorized to form dark plasmaspheres, or "Dark Earths." [The author’s papers, referenced 18, 19, 20 below, discusses their origin, dimensions, structure, dynamics and habitability]. Dark Earths are dark matter planets, in the form of dark plasmaspheres, that are coupled gravitationally to the ordinary matter earth and co-rotate with it.

The search for dark matter planets is an active area of research. Physicist Yang Bai, from the University of Wisconsin-Madison (USA), and his research colleagues, are searching for dark matter exoplanets outside our Solar System. It is ironic, though, that the dark matter planets that are gravitationally coupled to our ordinary matter visible earth is being overlooked. Nevertheless, the numerous dark matter experiments being conducted on Earth would be unintentional probes into these Dark Earths. The Dark Earths support the evolution of well-defined dark plasma lifeforms [24].

The mass of Earth has been determined to a very high precision using gravitational measurements. However, these measurements are sensitive to the sum of the dark and ordinary matter and hence would not be able to distinguish between the two. (The researchers who took the previous measurements probably would not even be aware that dark matter should be considered.) In a 2023 research paper [1] on “Probing Dark Matter Inside Earth…,” researchers noted, “The mass of Earth has been determined to a very high precision using gravitational measurements. These measurements are sensitive to the sum of the DM [dark matter] and baryonic mass [i.e., normal matter] and hence would not be able to distinguish between the two. *Gravitational experiments do not*

distinguish between normal matter and DM." (Emphasis added.)

Historically, therefore, the mass estimates of the Earth conflated dark and ordinary matter. This mass conflation obscured the presence of dark matter on Earth. If all the planets and the sun had significant amounts of relatively dense dark matter within their cores, they would still be complying with Newton's laws of gravity, because their individual (historically recorded) masses would simply include the mass of the dark matter.

Recently, researchers realized that the presence of dark matter inside Earth may be indicated by deviations of the neutrino oscillation probabilities from their expected values. A 2023 analysis of a one-year data set from the IceCube detector rules out the presence of more than 32 percent of the mass of the core or 24 percent of the mass of the Earth to be composed of dark matter at the one sigma level. Atmospheric neutrino oscillations studies at the Super-K experiment rules out more than 21 percent of the mass of the entire Earth being in the form of dark matter at the one sigma level. The mass of dark matter in and around the entire planet may therefore be about 20 percent and in the core about 30 percent. This is highly significant and would be able to support the gravitational influence of a series of tenuous Dark Earths. (This has been more intensively discussed in the author's paper [20])

The phenomena discussed in this paper are proposed to originate primarily from the lowest-energy Dark Earth, classified as "Alpha Dark Earth" in the dark plasma hypothesis. It is estimated to be as large as Jupiter. Despite being much larger it is tenuous and would therefore account for only a fraction of the gravity (as already discussed above). The density is sufficient to host tenuous radiation-like plasma lifeforms. It has habitable zones which intersect with our own, that would allow for occasional inter-sector visitations. (The higher energy Dark Earths and their lifeforms are outside the scope of this paper.) Different cultures throughout history have interpreted encounters with these plasma lifeforms from the lowest energy Dark Earth through the lens of their belief systems. The mechanisms described in the next section show

how these hypothesized dark plasma lifeforms from this Dark Earth can manifest observably, albeit momentarily, and provide some foundation on the underlying mechanisms that will be required to understand and reinterpret the events that will be discussed later.

Dark Ionization Process

Foundational Concepts

Electrons in a plasma tend to overshoot their trajectory as they approach the protons to which they are attracted to. As they move back and forth, they produce natural oscillations of the electrons within the plasma. The frequency of the oscillations is called the “plasma frequency.” (The term is usually applied to the oscillating frequency of the lighter particles, for e.g., the electron in ordinary matter plasma, in the presence of the heavier particles such as protons or positive ions.) This frequency is proportionate to the number of particles within a given volume, i.e., its particle number density, and strength of the electric charge but inversely related to its mass.

Collisions between dark matter particles and ordinary matter particles on earth can knock out electrons and protons from atoms, ionizing ordinary matter. In other words, it would generate plasma, with detectable heat, light, radiation and electricity. If a dark plasma lifeform increases its density (i.e., the amount of matter in a given volume) it would raise the collision rate between ordinary and dark matter particles. A usually tenuous dark plasma lifeform could increase its density by simply reducing its volume. This would reduce the interparticle distance (i.e., the mean free path) resulting in an increased number of collisions.

The increased density would increase the plasma frequency, as the frequency is proportionate to the (number) density of particles. An increase in plasma frequency means that the frequency of oscillations increases. The increased motion would cause the number of collisions between particles to increase.

Additionally, when there are fluctuations in the density of the particles (i.e., rapid density modulations) in the dark plasma

lifeform – just by a plasma lifeform increasing and decreasing its volume rapidly in a pumping action (and ingesting more particles if necessary), the motion and kinetic energy of the particles would increase. This would increase the number of collisions between particles.

Furthermore, extremely fast-moving plasma lifeforms zipping along magnetic field lines in the Dark Earth or using electric wind propulsion (or other modes), as discussed below, will cause their dark matter particles in the lifeform to collide forcefully into ordinary matter particles, causing ionization in ordinary matter atoms.

Under the dark plasma hypothesis, the collisions are effected through the weak nuclear force, through the exchange of Z^0 bosons. We assume that a dark plasma lifeform which, even in its relaxed state, is many orders of magnitude more dense than the ambient density of dark matter. When the lifeform significantly reduces its volume prior to the dark ionization process, the density is ramped up even much higher. Hence, the collision rate during the dark ionization process, involving a dark plasma lifeform, is many orders of magnitude higher than in current dark matter detectors.

Dark Ionization Process

The dark ionization process occurs when a plasma lifeform increases or rapidly oscillates its density by increasing and decreasing its volume. When these density modulations occur, the rate of collisions between dark matter particles and ordinary matter particles increases. When these collisions occur, ordinary electrons may be kicked to higher energy states or displaced from the atoms or molecules. When the electrons are displaced, ordinary plasma forms around the dark plasma lifeform.

At the initial stage, the speed of electrons and protons would be much higher. During collisions, the larger protons (both ordinary and dark) would collide more often because of their larger target area (or cross-section of interaction) than the tiny electrons. This cools down the protons but keeps the electrons hot. Since the mass density of the plasma is primarily

contributed by the cold protons, the overall average temperature will be much cooler. Hence, the process generates an envelope of short-lived, ordinary cold (or nonthermal) plasma around it.

Cold or non-thermal plasma is a plasma composed of more than one species of particles, for e.g., electrons and protons. Unlike the “hot” plasma (in nuclear fusion laboratories, the sun or the stars,) it is not generated by increasing the temperature. It is generated by direct collisions between particles. Examples of cold plasma include the auroras (which are produced through the collisions of particles) and the plasma in fluorescent lamps which can be cool to the touch.
When the electrons at higher energy states and the electrons that are displaced return to lower energy states in the atom or recombine, energy is released. This process will generate ordinary heat, light, radiation (which could include radio and infrared waves), electromagnetic fields and electricity, as follows:

- Heat: While the plasma is "cold" overall, particle interactions still generate detectable thermal energy (infrared radiation) and microwaves at the lower end of the ordinary electromagnetic spectrum.

- Light: The ordinary plasma envelope emits ordinary photons, making the entity visible as a luminous, glowing or shadowy form momentarily. (See below for what determines the form.)

- Radiation: The process can emit a broad spectrum of radiation, including radio, infrared and microwaves when the plasma is low energy. On rare occasions it may also emit ultraviolet light or X-rays that can be damaging to human tissues.

- Electromagnetic fields: The motion of particles in the plasma will generate electromagnetic fields. The natural oscillations of dark matter particles in the dark plasma will cause collisions with ordinary particles in a periodic fashion, resulting in the density of the ordinary plasma to increase and decrease cyclically, generating a *pulsating*

electromagnetic field and radiating *pulsating* electromagnetic waves.

- Electricity: The displacement of ordinary electrons during ionization generates weak currents and localized electrical fields.

Visibility of Cold Plasma Envelope

For an electromagnetic wave from the environment to pass through a plasma body, its plasma frequency must be greater than the frequency of the plasma body.

If the plasma frequency is higher than the ambient light in the plasmasphere, it will reflect ambient light, making the plasma body become like a *reflective mirror* and shine brightly like a metallic object. When the frequency is very high, the brightness will be intense - this would be described as the “arc mode.” When the frequency is very moderate, the brightness will be gentle - this would be described as the “glow mode.” If it reflects the environment it will act like an invisibility cloak. If it is a plasma envelope around an ovoid (the default shape of a plasma lifeform in earth’s gravity) it will bend the light to produce a distorted ovoid-shaped image of the environment which will be seen to be mysteriously moving from one point to another.

If the plasma frequency is less, the plasma will become like a *refractive lens* and be transparent to the light (in other words, it will disappear). This can be described as the “transparent mode.” If the refractive index of the plasma is not one, it will bend the light to produce a distorted ovoid-shaped image of the environment which will be seen to be mysteriously moving from one point to another. Objects seen through the lens may be magnified.

If the plasma frequency is the same as the frequency of the electromagnetic wave, the two frequencies become resonant with each other and the light is absorbed. This results in a transfer of energy from the electromagnetic wave to the plasma body. This is called “resonant absorption.” When a material absorbs light, it becomes dark. Hence, the plasma

body will become dark and shadowy while absorbing energy from the electromagnetic waves in the environment. This would be described as the “dark mode” of the plasma.

The plasma frequency therefore acts as a gate. When it is raised, the plasma body is opaque and shiny (i.e., in an arc or glow mode) . When it is lowered, it will let the light in and seem to disappear as it becomes transparent (i.e., the transparent mode). When it is in between, i.e., the same frequency as the ambient light, it will be in the dark mode.

When a cold plasma envelope is produced around a dark plasma lifeform, it will only become visible to observers if its density and plasma frequency is higher than the frequency of the ambient light in the ordinary matter sector. The density and frequency of the envelope can be increased by a plasma lifeform simply by ramping up the dark ionization process. Initially, the cold plasma envelope will be transparent; then as the density, plasma frequency, density modulations or velocity of the lifeform increases, it will become black and shadowy. Subsequently, when the variables are increased further, it will start to glow and when increased even further, it will start to shine brightly. If it wants to disappear, it just reduces its speed, density and/or plasma frequency, and/or density modulations. In this scenario, it will gradually lose its brightness, become dark and then disappear.

However, even when it disappears from view, it may still be there. Conversely, if the dark plasma lifeform zips away at an accelerated speed (which small plasma lifeforms often do), the cold plasma envelope may be left behind as a plasma cloud. In this case, an apparent UAP or UFO may be sighted but the dark plasma lifeform is actually not there. The MOD study, published in 2005, and discussed below, concluded that most UAP sightings were due to ordinary plasma bodies generated by incompletely burnt-out meteors plunging into the atmosphere during meteor showers. Some of these leftover shells of plasma may be generated by dark plasma lifeforms, not meteors.

The persistence of the visible or detectable ordinary cold plasma envelope around dark plasma lifeforms is also

dependent on environmental conditions; it dissipates rapidly at sea level but can linger longer in the more highly ionized atmosphere at higher altitudes. The ordinary cold plasma generated by dark plasma lifeforms from the Dark Earth would generally manifest only momentarily.

When the cold plasma envelope is in arc or glow mode, it will reflect the radio waves from a radar and can be detected. When it is in transparent mode, the radio waves will pass through it, and the radar will not detect it in a direct way. However, if the refractive index of the plasma lens (as discussed above) is less than 1, the radio wave will be refracted at an angle. If there is another object ahead and the radio wave is reflected, it will do so at an angle that will not be the same as when the wave is directly reflected by the object. In the dark mode the radar's radio waves will be absorbed. If there is an object ahead it will not reflect the radio wave. This anomaly would suggest that the radio wave was absorbed by some object lying between the radar station and the object.

Kinetic Mixing

According to theoretical physics, dark matter particles like axions can convert to ordinary photons in strong (not stronger than an MRI machine) and weak but resonant magnetic fields. Dark photons can convert to ordinary photons and back, analogous to the well-studied and observed behavior of neutrino oscillations, in which neutrinos oscillate between different types or flavors of neutrinos. Dark photons and axions may also interact. This opens up another route through what may be called an "axion-dark photon" portal, through which ordinary photons can be produced. These processes are examples of "kinetic mixing." This provides another means (apart from the dark ionization process) for a dark plasma entity to become visible or be detected by instruments without necessarily generating a full envelope of ordinary plasma. This process could account for phenomena captured on film but not seen by the naked eye when taking the image, as the camera sensor slowly accumulates the converted ordinary photons over time.

Attractions - Through a New Fifth Fundamental Force

There is both astrophysical evidence, as well as experimental data, which suggests the existence of a new short-ranged attractive fifth force that could mediate between ordinary and dark matter particles. It is attractive to neutrons and electrons over the range of a single atom.

Astrophysical Evidence

Many astrophysicists note that there must be a currently unidentified force that will allow dark matter to interact with ordinary matter other than gravity and the weak nuclear force. Antonio Boveia, a physics professor at Ohio State University (Columbus), searches for dark matter and other new particles and forces with the ATLAS experiment at the Large Hadron Collider in Geneva, Switzerland. He believes that, besides gravity, ordinary and dark matter can interact through dark bosons. (Bosons are force-carrying particles.) He theorized in 2018, “There must be a means for the visible universe and the dark universe to communicate with each other…A force requires a force carrier or boson. The electromagnetic force is carried by the photon, the weak nuclear force by so-called vector bosons, and so on. Interactions between dark matter and normal matter should be no different: They could happen by exchanging dark bosons.” Hence, the existence of a dark vector boson was hypothesized by him.

In an article in Astronomy & Astrophysics Letters in 2020, scientists at the Instituto de Astrofísica de Canarias (IAC)/University of La Laguna (ULL) and of the National University of the North-West of the Province of Buenos Aires (Junín, Argentina) have shown that dark matter in galaxies follows a “maximum entropy” distribution. To reach this state, the dark matter would have had to collide with itself, just as gas molecules do, to reach an equilibrium in which its density, pressure, and temperature are related. The equilibrium indicates that the dark matter particles have transferred energy with itself and/or with ordinary matter. However, researchers say they don’t know how the dark matter reached this type of equilibrium. “The fact that equilibrium has been reached in such a brief time, compared with the age of the Universe, could be the result of a type of interaction between dark matter and normal matter in addition to gravity,”

suggests Ignacio Trujillo, an IAC researcher. He says, “The exact nature of this mechanism needs to be explored.”

Fifth Force May Have Been Detected in the Lab

Particle physicist have now stumbled on what could be the particle mediating the fifth force – a vector boson as earlier hypothesized. A particle called the “X17” was proposed by Attila Krasznahorkay and the ATOMKI group in Hungary at the Institute for Nuclear Research at the Hungarian Academy of Sciences. This was after repeated anomalies were observed in nuclear decays which suggested a new boson around 17 megaelectron volts (outside the standard model of particle physics). (A boson is a particle that mediates a fundamental force.) This short-range fifth force is expected to be able to link dark and ordinary matter particles. This force is hypothesized to be an attractive force with respect to neutrons and electrons. The Hungarian researchers published a paper in Physical Review Letters, one of the most prestigious journals in physics.

In 2015–2016, scientists fired protons at lithium-7 atoms, which caused them to briefly form an unstable version of beryllium-8. As this unstable beryllium broke apart, it released pairs of electrons and their antimatter counterparts, positrons. Surprisingly, more of these pairs showed up at a specific angle than expected. This odd pattern hinted that a new, unknown particle, possibly a lightweight boson weighing about 17 MeV, might have briefly existed during the decay. Follow-up experiments in 2019 to 2025 observed similar anomalies in helium-4 and carbon-12 nuclear transitions, reinforcing the hypothesis of a consistent particle mass near 17 MeV. These anomalies were interpreted as the creation and decay of a light boson, named X17.

Jonathan Feng, a professor of physics and astronomy at the University of California at Irvine and his team followed up the Hungarian team’s work for years. His research group published a paper on the heels of the Hungarians’ 2016 work, laying out a theory to observe what Krasznahorkay’s experimental team had seen. Meanwhile, nuclear physicists around the world set to work looking for errors in the Hungarians’ work and have come up empty-handed over the

past few years. “Some very well-known nuclear physicists have done that exercise,” Feng said. The numbers seemed to add up, and no one could find ways their equipment was calibrated incorrectly. The only way to explain X17 was a hitherto undetected “fifth force.”

Theoretical work by Feng et al. in 2016 proposed that X17 is a vector boson mediating a new fundamental interaction. It couples weakly to protons but more strongly to neutrons and electrons. This selective coupling avoids constraints from existing experiments and explains the observed anomalies. It is a short-range force: With a mass of about 17 MeV, the force mediated by X17 would have a range of about 10 femtometers, similar to nuclear forces over an approximate range of a single atom. Since X17 interacts weakly with ordinary matter and could couple to dark sector particles, it’s a candidate for mediating interactions between dark matter and visible matter. Feng noted, “X17 could be a particle, which connects our visible world with the dark matter.” Feng says that the Hungarian team’s 2019 experimental results showed that there was only a one-in-a-trillion chance that the results were caused by anything other than the X17 particle, and the new fifth force.

Implications on Collisions

Many dark matter experiments rely on collisions between dark matter and ordinary matter particles to cause nuclear recoils that would confirm the existence of the dark matter particles. These are usually WIMP-based dark matter models that rely on the weak force. This assumes that dark matter particles (such as neutralinos and sterile neutrinos) interact with atomic nuclei via the weak force’s Z^0 boson exchange. This is a neutral current interaction: no charge is transferred, but momentum is. The result is a nuclear recoil—a tiny "kick" to the nucleus, which can produce ionization. These are not “collisions” in the classical sense, but quantum scattering events with extremely low cross-sections ($\sim 10^{-46}$ cm^2 or smaller).

If X17 exists and couples to both dark matter and neutrons, it could create a Yukawa-type attractive potential between dark and ordinary matter that would enhance local clustering or

scattering cross-sections and enable non-weak interactions in detectors. *This would provide an additional new portal between the visible and dark sectors (apart from that provided by the weak force) in facilitating the dark ionization process*, as discussed above. This attractive force will make the dark ionization process more efficient. The interactions will still be rare in the laboratory because the ambient dark matter density is extremely low. However, plasma lifeforms that reduce their volume prior to the dark ionization process will be many orders of magnitude denser than in the laboratory environment. The collision rates between ordinary and dark matter particles, compared to in a laboratory, would therefore be much higher.

Implications on Coupling with Ordinary Matter

This fifth force will allow dense ordinary matter bodies to attract layers of different dark matter particles (from different sectors and at different energy levels) that accumulate over time in the shape of the ordinary matter bodies or objects. Conversely, the fifth force will enable dark plasma bodies to attract ordinary matter particles at close ranges. For e.g., we could expect compact and dense dark plasma lifeforms to attract ordinary matter particles when they in close proximity. The X17 boson, mediating the fifth force, acts like a short-range “plasma glue,” binding dark plasma to ordinary baryonic structures without electromagnetic coupling.

Dark plasma bodies in Dark Earths are extremely tenuous compared to ordinary matter bodies. Hence, the accumulation of light ordinary matter particles around the dark plasma body would be expected to be tenuous. These are therefore expected to produce only a thin veneer of ordinary matter particles over the dark plasma lifeform. The dark plasma lifeform, or parts of its body, may therefore become visible to ordinary human sight momentarily before disappearing, through the reflection of ordinary photons.

This veneer of ordinary matter particles will allow the dark plasma lifeform to create sensations of touch when it contacts a human body. It can also generate low level sounds when it impacts hard surfaces. The veneer may also reflect some ordinary light and cause faint shadows to be cast.

Other Interactions

There are other more exotic interactions allowed under a variety of theoretical models in particle physics. These will not be discussed as they go beyond the scope of this paper.

Interaction Zones

Most of these interactions, between dark plasma lifeforms and the ordinary matter earth in which we live, occur with dark plasma lifeforms from the lowest energy dark plasmasphere coupled to the visible ordinary matter Earth [18]. As hypothesized by the author, humans may have a dark plasma component coupled with the ordinary matter biochemical body [17]. If this dark plasma component has its own ensemble of sensory systems, it may be possible for this component to sense dark plasma phenomena by interacting with the particles in the specific dark sector. In this case, “dark sight” will be operating.

This "dark sight" will be most accessible during non-ordinary states of consciousness, such as deep prayer or meditation, or where the locus of consciousness shifts from the ordinary body to its dark plasma counterpart due to other causes. These causes could include neurological damage and/or the ingestion of psychoactive drugs, etc.

In most cases, relating to phenomena discussed in this paper, the interactions would occur with the lowest energy dark sector that is coupled to the ordinary matter sector. This dark plasma component would communicate the sensory information through quantum processes in the brain, which would then be assimilated and embellished by the ordinary matter brain (particularly the left hemisphere) which would try to interpret it within a cultural context.

Now that we have covered aspects of the dark plasma hypothesis relevant to the discussion of UAPs or UFOs, we will proceed to show how this theoretical framework explains the various sightings quite easily and robustly.

Extra-Terrestrial Hypothesis (ETH) - The Most Improbable Explanation

Unidentified flying objects (UFOs) and unidentified aerial phenomena (UAP), which sporadically appear in our skies and exhibit highly intelligent behavior, are often manifestations of proto plasma lifeforms from the ordinary matter earth and more complex plasma lifeforms from the lowest energy Dark Earth (described as Alpha Dark Earth in the author's Dark Plasma Hypothesis).

One of the most persuasive reasons as to why this would be more probable than UFOs/UAPs from other star systems, is the near impossibility of ordinary matter vehicles to travel these vast distances within a reasonable time. This would be the "transport or proximity problem." Even in the slim chance that this would be possible, it begs the question: would it be cost-effective for exponentially intelligent aliens (who are able to traverse between stars) to do so? What are the benefits of visiting a relatively technologically primitive human civilization, considering the huge cost that must be incurred? This would be the "ROI (return on investment)" problem. There is no clear reason why they would be monitoring a tiny rock to learn the technology of a civilization which has not even learnt how to traverse and colonize their own solar system using manned vehicles. However, it is easier for any dark plasma "inter-terrestrial alien" from a counterpart Dark Earth to visit us. Yet, many still cling onto the belief that the majority of these visitations are from extra-terrestrial aliens from other stellar systems. This is akin to a religious belief which has no scientific basis.

It also makes more sense to consider generally that these are not extra-terrestrials when we consider the messages from UFOs (and also Marian apparitions which are considered similar anomalous events), about imminent disasters and admonitions to take care of the ordinary matter Earth. Why would an alien from another stellar or galactic system be bothered by the destruction of a tiny rock in a distant galaxy or stellar system? This would be "messaging problem." However, it would be understandable if these were from counterpart Dark Earths. They would be concerned about environmental

degradation, nuclear holocausts, and the destruction of the ordinary matter Earth, as the dark planets that they are inhabiting are gravitationally coupled to our ordinary matter planet. The destruction of our planet could impact their existence as we share the same gravitational field. They would therefore naturally be inclined to conduct regular surveillance and sound-out warnings to the less advanced juvenile civilization here, still engaged in petty tribal wars and not able to think beyond the borders of their own country, and to be able to take care of the planet. We will realize from the evidence that most of the encounters with aliens and UFOs are really sporadic encounters with inter-terrestrial beings from Dark Earths (not extra-terrestrials) or primitive ordinary plasma lifeforms from the visible Earth's plasma regions.

All three problems: the travel or proximity problem, the ROI problem and the messaging problem are solved by the author's "inter-terrestrial hypothesis (ITH)." This posits that complex, intelligent UAPs/UFOs originate from the lowest energy dark matter planet (the Alpha Dark Earth) that is gravitationally coupled to the earth. By positing the aliens within our own space, it makes the three problems cited irrelevant and dissolves the inconsistencies.

Nevertheless, if Earth is moving inside the Randall-Reece dark disk, we could expect alien lifeforms that occupy the biospheres in the dark disk, who may be from other stellar systems or even galaxies (i.e., extra-terrestrials), to find themselves in proximity with Earth's dark biospheres, probably unintentionally. This may happen at different points during our history and in the future, making such *rare sporadic encounters* inevitable but rare. Furthermore, as discussed previously by the author [20], it has been noted that clouds of dark matter pass through Earth regularly every ten thousand years in an encounter lasting about fifty years. Hence, there is a very *small probability* that extra-terrestrial alien plasma lifeforms, transported by these clouds, could be encountered on Earth.

Additionally, primitive or proto ordinary plasma lifeforms from the visible Earth's plasma regions may be visible intermittently in the ordinary matter Earth's plasma environments. These

regions include the ionosphere, plasmasphere, and magnetosphere, as well as the Van Allen radiation belts and dusty plasma clouds orbiting the Earth. The ionosphere can be as ‘low’ as 50 km (31 mi) from the surface of the Earth. It is where the auroras, which can be easily seen by us, occur. Hence, it will not be impossible for people to get fleeting glimpses of less complex ordinary plasma lifeforms zipping through the ionosphere or hovering in the sky and slowly fading as their plasma frequency and density downshifts.

Based on the evidence, most UFO related “abductions” most likely relate to the lowest energy alpha dark plasma bodies that are linked or coupled to our ordinary matter bodies, and not the ordinary matter body. There are usually no signs on the ordinary matter body of any impacts and no ordinary matter objects left by aliens. Acoustic and electromagnetic telepathy, a common form of communication between dark plasma lifeforms, is frequently associated with these abductions. Dark plasma bodies are electromagnetic entities, not biochemical carbon-based bodies. Hence, it is natural for them to receive and transmit dark electromagnetic waves. (We must refrain from the natural tendency to treat or imagine them as biochemical entities which do not have these abilities.)

A dark plasma lifeform would be able to communicate with a human by emitting dark electromagnetic or acoustic waves to a dark plasma body that is coupled to the ordinary matter body. In a Type 2A encounter, the message would be first received by the linked dark plasma body and then relayed to the ordinary matter brain through quantum processes in the human brain. Researchers have also noted that these “abduction scenarios” have many elements in common with OBE (out-of-body experiences) and NDEs (near-death experiences), which relate to dark plasma bodies that can be comprehensively explained through plasma dynamics in dark plasmaspheres.

The Plasma Connection

In 2024, a peer-reviewed paper, entitled Extraterrestrial Life in the Thermosphere: Plasmas, UAP, Pre-Life, Fourth State of Matter, was submitted to the Journal of Physics by R. Joseph from the Astrobiology Research Centre in California (USA),

and his colleagues from other distinguished institutions. In this paper they reported, “The ‘plasmas’ observed in the thermosphere engage in behaviors similar to simple multicellular organisms; a phenomenon also observed among plasmas generated experimentally. (Actually, as noted in a previous paper by the author [18] and other publications, plasma lifeforms have structures that resemble unicellular organisms. “Simple multicellular organisms” is a near-approximation.) Plasmas are electromagnetic entities that have cellular characteristics and display distinct behavioral patterns which are affected by their electrical properties; and this causes them to interact and behave individually or collectively. Because plasmas in the thermosphere are attracted to electromagnetic activity and descend into thunderstorms and the lower atmosphere, they likely account for at least some of the numerous reports of UFOs/UAPs over the last several thousand years including the “Foo fighters” observed by German, Japanese, and Allied pilots during WWII, and at least some of UAPs recently reported by jet pilots.”

Prior to the above paper, the British Ministry of Defense (MOD) completed a four-year study (1996 to 2000) that looked at data compiled from reports of UAPs received by the MOD prior to that date. The study, published in 2005, concluded that most of these sightings were due to ordinary plasma bodies generated by incompletely burnt-out meteors plunging into the atmosphere during meteor showers, although with certain reservations. They cautioned, “It is not certain that the radiation/fields are conventional and electromagnetic in nature...any pursuit of this process of identification or elimination is pointless if it turns out that UAP radiation is other than EM [electromagnetic] radiation as we currently understand it” (emphasis added). Indeed, dark plasma lifeforms radiate dark (not ordinary) electromagnetic waves – as discussed in a previous paper by the author [21] and in other publications.

The MOD detection data provides evidence of dark plasma thought-holograms and more rarely, intelligent plasma lifeforms from Alpha Dark Earth, which generate ordinary plasma through the dark ionization process. The ordinary cold plasma (generated by the dark ionization process) will outline

the shape of the plasma body and be seen momentarily before it dissipates as it approaches the surface of the Earth. (This is a Type 1A encounter relating to ordinary sight.) Nevertheless, the dark plasma component will continue to be seen by those who have activated their alpha dark plasma body. (This is a Type 2A encounter relating to dark sight.) The ordinary plasma generated from dark plasma should be distinguished from purely ordinary matter plasma in the atmosphere. The most frequent UAP/UFO phenomena reported relate to purely ordinary plasma. Ordinary matter plasma blobs, which are charged buoyant bodies, would seem similar to microbes as they dart back and forth in the atmosphere.

The MOD report also notes that astronauts have observed these plasma-like structures engaging in complex behaviors, including approaching space shuttles and experimental satellites generating electromagnetic activity; and have described them as “definitely not rigid ” and “not a solid metal structure ” and “oval shaped like a series of ellipses .” The MOD says, “And yet, they have metallic coloration according to eyewitness reports by astronauts; possibly silver, which might also account for any reflective properties.” These apparent anomalies can be easily explained by the changing plasma frequency of plasma bodies against the ambient light. As discussed in the introduction above, plasma bodies can look dark and shadowy, transparent or metallic bright, in an instant, depending on their plasma frequency.

Let us assume a Type 1A encounter, with the generation of ordinary plasma by a dark plasma lifeform or simply an encounter with an ordinary matter plasma body. If the plasma frequency of the body is higher than the frequency of the ambient light, the plasma body becomes reflective and shiny, like a metallic object or vehicle. This can provide it with an invisibility cloak if it reflects the surrounding environment, allowing it to merge visually with the background. If it is less, the plasma body will become like a refractive lens and be transparent to the light (in other words, it will disappear). If the refractive index of the plasma is not one, it will bend the light to produce distorted ovoid-shaped images of the environment which will be seen to be mysteriously moving from one point to another. If the plasma frequency is the same

as the frequency of the ambient light, the plasma body will become dark and shadowy, while absorbing energy. When they are dark, they will look like shadows and stealth aircraft. When they are reflective, they will look like metal vehicles. When they suddenly become transparent, by damping their plasma frequency through the expansion of their bodies to reduce the number density of the particles which would result in the dissipation of the ordinary plasma, they may appear to dematerialize (although their dark counterparts may still be there).

Electromagnetic Waves and Pulsating Fields

Due to the high speed of many plasma bodies through the atmosphere, the dark matter particles in their bodies or vehicles (which are denser than the ambient density of dark matter particles) can collide with a significant force with ordinary air molecules. Through this dark ionization process, ordinary plasma is generated. This ordinary plasma is what initiates some of the UAP and UFO sightings and effectively cloaks the dark plasma beings and objects. The visible manifestations in the ordinary matter earth are not of the actual dark plasma lifeform but its cold ordinary plasma envelope. The so-called UAP and UFO sightings relate to the manifestations of these cold ordinary plasma envelopes.

When ordinary plasma is generated for a short duration or when dark matter particles (such as axions and dark photons, and their equivalents) convert to ordinary matter particles (such as ordinary photons at radio wave bands) in certain conditions (for e.g., in resonant magnetic fields), they generate electromagnetic waves which can be picked up by radar momentarily and also by radio. Furthermore, the natural oscillations of dark matter particles in the dark plasma cause collisions with ordinary particles in a periodic fashion, resulting in the density of the ordinary plasma to increase and decrease cyclically, generating a pulsating electromagnetic field. Pulsating electromagnetic fields are dynamic and can penetrate deeper into biological tissues, whereas static fields are constant and limited to surface-level effects.

Ordinary plasma envelopes dissipate as charged particles rapidly recombine due to the strong electric charge in the

ordinary matter sector. However, in weakly ionized environments they may be sustained a bit longer. For e.g., in an electrical installation with generators and other electrical equipment, the air will already be slightly ionized or in higher altitudes (on mountain tops and in the atmosphere). Hence, the ordinary plasma envelopes of UAPs and UFOs will be able to linger longer in those environments. This is the cause for many sightings to be around electrical installations and in higher altitudes.

Light Phenomena

As often reported, light is observed radiating from the entire UFO. Common descriptions such as “surrounded with a red glow” and “wrapped in a blue haze” clearly indicate that the source of UFO luminosity is not the object itself but the air around it. During the dark ionization process dark matter particles collide with atoms in the air, ionizing them. This excitation begins with the gas with the lowest ionization energy, i.e. xenon, to gases with higher ionization energies (i.e. the other noble gases followed by oxygen and then nitrogen).

At the lowest excitation levels, therefore, “blue,” “brilliant blue,” and “luminous blue,” associated with xenon, will be generated. While ionized xenon emits a bluish-white light, oxygen glows green to red depending on altitude and energy, and nitrogen radiates blue to violet hues. The colours generated by the different gases may also be combined or seen as a mixture of different colours. Together, they may produce an electric blue and purple glow. (This is also often seen in auroras and high-energy discharges.) This has been reported in many daytime UFO sightings. Ionized neon gas produces a bright orange-red glow. A great percentage of night-time sightings report UFOs that appear as “orange balls of light.” These have been described as “luminous globes,” “glowing orbs,” “spheres of light” or “balls of fire” and are typically orange-yellow or white in colour.

Sometimes the light emitted by a UAP is so intense that its surface is entirely obscured from view. Witnesses may describe this light as equivalent to a “welding torch” or “burning magnesium.” These are ordinary plasma envelopes of UAPs that are in the arc mode. Certain UAPs initially observed on

the ground become dazzling just before zooming-off. This indicates that the plasma frequency increases significantly on take-off. In some UFO encounters, black objects are observed. These are plasma envelopes of UFOs in the dark mode. Certain UFOs in the “glow mode” look like ordinary objects and may appear opaque. Due to the veneer of ordinary matter particles (facilitated by the attractive fifth force, as discussed in the introduction), they may also reflect some ordinary light and cast faint shadows. UFO witnesses have reported entire objects that were transparent (with only an outline). This could be explained by plasma in the “transparent mode,” as discussed in the introduction. Depending on the refractive index of the plasma lens that the cold plasma develops, objects seen through the lens may be magnified.

In one sighting, a disc-shaped object flew above a cyclist for five kilometres at a height of six meters. It “was luminous and seemed made of glass,” according to the witness. In the other instance, witnesses in a stalled vehicle saw occupants inside a “brilliant, transparent, mushroom shaped object.” UFOs can therefore be transparent or translucent or appear shadowy, depending on the plasma frequency of the ordinary plasma generated by the dark ionization process. UFOs have also been reported to be in the form of vortices (like a moving cyclone) or vapor. All these forms are compatible with descriptions of plasma and its dynamics.

A colored radiation or “aura” from UFOs may be seen. This would be composed of ordinary light when the observer uses ordinary sight (Type 1A encounter) and “dark light” when using “dark sight” (Type 2A encounter). Due to the different sight modalities, different witnesses may give different accounts of the colour and shape of these auras. Most people, however, see only the aura composed of ordinary light (i.e. the “ordinary aura”) emitted by the tenuous ordinary plasma which is generated by the dark ionization process.

Acoustic Phenomena

Besides light, the ordinary plasma also generates heat. The microwaves that are generated by the dark ionization process can heat up biological tissues. Thermoelastic waves of acoustic pressure are generated when microwaves heat up soft tissues

in the head. These acoustic waves travel by bone conduction to the inner ear to cause buzzing and other sounds that can be heard only inside the head and not by others who are not oriented similarly. In an ordinary bolt of lightning, the temperature is raised in a split second to about 25,000 degrees Celsius causing ionization of most of the atoms in the air and a sudden expansion of the gases generating pressure waves. This manifests as the loud crashing sounds of thunder.

Similarly, a powerful dark ionization process can generate thermal shock waves which can give rise to similar sounds. Rumbling sounds, similar to rolling thunder, have been heard prior to UFO sightings (and Marian apparitions). (This is a different phenomenon from sonic booms which are caused by the motion of the object. Biological UFOs, due to their low mass, produce only weak sonic booms.) During the Marian apparitions at Fatima, several observers noted “a light breeze blowing.” Another witnessed, “a breeze strong enough to make him feel cold.” These electric or ionic winds are also witnessed prior to UFO sightings. They are caused by the sudden expansion of the volume of air due to the heat and repulsive forces experienced by ionized atoms with similar charge as a result of air ionization caused by the dark ionization process.

Smelly Plasma

The ionization of the air caused by the dark ionization process in the proximity of plasma life forms will generate electrochemical reactions in the air that can be sensed as odors. Plasma life forms or what may be described as “biological UFOs,” can therefore be detected by smell. When the ordinary plasma generated by the dark ionization process is in the arc mode, nitrogen can be elevated to a metastable state, producing a persistent soft, white glow. This “activated” nitrogen will readily combine with many other elements unlike ordinary nitrogen. It combines with hydrogen to form ammonia (NH3) and with oxygen to form nitric oxide (NO). This oxide is stable at high temperatures. However, when below 150 degrees Celsius, it reacts with oxygen to form nitrogen dioxide (NO2).

The dioxide can also react with other atmospheric gases to form nitrobenzene, an oily toxic substance that is poisonous

and smells strongly like the oil of bitter almonds. It does not typically cause hallucinations but may produce brain fog, confusion and coma. Also produced by electrical discharges is ozone which has a sharp, clean, and slightly metallic scent, often described as the smell of electricity or the air after a lightning storm. Some witnesses describe the odor of ball lightning as being similar to nitric oxide or ozone, both of which are byproducts of electrical activity in the atmosphere. Pollutants like ozone or nitrogen dioxide can interact with skin lipids and proteins, potentially catalyzing sulfur oxidation and generating the smell of rotten eggs.

In this connection, the odor of ball lightning has frequently been described in many historical and modern accounts as a strong odor resembling burning sulfur. This is consistent with the smell of sulfur dioxide, which is a gas often produced during high-energy electrical discharges. The smell of rotten eggs is often linked to sulfur or hydrogen sulfide. It is often reported during close-contact events. These can be due to electrochemical reactions resulting from the generation of ordinary plasma through the dark ionization process at close ranges.

Most of the sulfur in the ordinary matter human body is concentrated in the skin, hair, nails, and connective tissues, primarily through sulfur-containing amino acids like cysteine and methionine. While sulfur dioxide is best known as an environmental pollutant, recent research reveals that it can also be produced within the body under certain conditions. In the skin, exposure to electrical stimulation can trigger oxidative stress, leading to the formation of reactive sulfur species. These reactions may involve the oxidation of organosulfur compounds, such as dimethyl sulfide, which can yield sulfur dioxide as a byproduct. Pulsating electromagnetic fields (say, from the cold plasma envelope of a dark plasma lifeform at close ranges) could hypothetically induce localized redox reactions that liberate sulfur dioxide and the smell of rotten eggs.

Taste of Plasma UAPs and UFOs

The cold plasma envelopes of purported UFOs can generate pulsating electromagnetic waves (due to plasma oscillations,

as discussed in the introduction), including pulsating microwaves. During UFO sightings, witnesses can sometimes experience unusual tastes which are experienced immediately but decay slowly. This can be explained by electrochemistry. Chemicals in saliva break down in the presence of pulsating and alternating currents up to about 1000 hertz and a current of larger than 100 microamperes (DC or AC). It is estimated that about one percent of witnesses can taste the presence of microwave energy. The presence of metallic teeth fillings and braces may modify the sensation.

Falling Residues

If the biological UFO zips-off to another location at high speed, the ordinary cold plasma (which usually has a cloudy appearance) will linger on for a short while, giving off very low levels of radiation. If the plasma (generated by the dark ionization process) is made of chemically active gases (i.e., hydrogen, hydrocarbons, silicates, etc.), then dust particles would form directly from chemical processes occurring in the plasma. When the gas atoms and molecules in the ordinary plasma subsequently recombine, together with the dust and water molecules, residues may form and clump to produce what has been described in the literature as “angel hair,” ectoplasm or other similar material, which usually dissipates before it reaches the ground. These falling residues have also been observed in Marian apparitions.

“Solid,” Noisy and Reflective Plasma UFOs

UFOs are also often described as being solid in appearance. The notion that tenuous plasma objects cannot appear to be solid is mistaken. Not only auroras but even hard solid metals are considered to be in the plasma state in science. Electrical discharges, like lightning (which generates ordinary plasma), hit like a ton of bricks, and can generate loud sounds and produce scarring on the ground. Ball lightning is typically the size of a grapefruit and lasts for a few seconds or minutes, sometimes hovering, even bouncing along the ground. These balls of plasma have been known to leave holes, furrows and scorch marks on the ground. If you think of biological UFOs as expanded versions of ball lighting, the “thud” of apparently solid UFOs on the ground is explained. The plasma lifeforms that we see because of the dark ionization process are, by

definition, denser than the relaxed state of the plasma lifeform. (If they were not denser, they would not be able to initiate the dark ionization process.)

Electromagnetic forces between the particles in the ground are the reason why we do not sink into the ground. So, the very feel of the “solid” ground is caused by the interaction of the electromagnetic forces in your body with the electromagnetic forces holding the particles of the ground together. Plasma can deflect electromagnetic waves. For e.g., the ionosphere deflects radio and TV waves to the ground. When ordinary plasma is generated by the dark ionization process it can be highly reflective giving the appearance of “solids” to radar. Due to the ionization of the air, and the generation of electromagnetic waves (including infra-red radiation, i.e., heat) the flight paths of bullets may be diverted, giving the impression of encountering a solid.

Additionally, a veneer of ordinary matter particles around the cold plasma envelope of the UAP/UFO, facilitated by the hypothetical fifth force, will enable it to produce sounds if it hits a solid wall. It will also be able to produce sensations of touch.

Signature Features of Plasma Lifeforms in UAPs and UFOs

The signature features of plasma lifeforms, as discussed in previous papers [24, 29] and other publications, have been seen on UFOs and UAPs on numerous occasions. These include plasmoids, vortexes and beams of light.

Based on its analysis, the British Ministry of Defence concludes that there are reports of hot spots or bright spots emanating along the axes of UAPs/UFOs, which may have different colours and temperatures. These many-colored hot spots are plasmoids which are also commonly observed in laboratory plasmas. Two filamentary currents may attract or repel each other depending on the direction of currents. If the currents are in the same direction (or oppositely charged particles in different directions), they will be attracted to each other. Where the attraction is greatest, kinks will form in the filamentary currents. These kinks will retard the flow of

charged particles causing them to accumulate and increase the charge density in these kinks. As the charged particles jostle in these kinks, they will collide with ordinary matter atoms which become excited due to the dark ionization process. As electrons in the ordinary matter atoms fall back to lower energy states or recombine, they will emit ordinary photons which then manifest as brighter visible “hot spots.” These have often been identified as “windows” from which bright light was emanating from a culturally embellished “spaceship.”

Since these plasmoids are composed of cold or non-thermal plasma, a series of plasmoids along the axis of a cold plasma envelope may have different colors due to the gradations in the temperature. Through the Hall (magnetohydrodynamic) effects, these plasmoids can develop into rotating vortical structures. Rotating vortexes have been seen embedded within UAPs or UFOs. This is a signature feature of plasma bodies. Pulsed collimated beams of light from UFOs are also sometimes reported. These are guided by the vortex systems and undergo “lensing effects” as they pass through the curved sheath of the translucent ovoid which focuses the beam that emerges at specific targets. This dark light, if intense enough, emits ordinary plasma through the dark ionization process, which can be seen by ordinary sight (a Type 1A encounter) and has been depicted in UFO sightings.

Transport Mechanisms

There are myriads of lifeforms in the Dark Earth from different evolutionary pathways. Hence, just like on earth, their mode of transport and communication will vary from one plasma lifeform to another. Their default motion would simply be to move by interacting with the electrical and magnetohydrodynamic environment in the lowest energy Dark Earth in a variety of ways. Some aspects of its basic motion would be similar to the motions of a test charge in an ionized environment. This motion will be inexplicable when superimposed against the visible Earth. In fact, the reason many of the motions reported of UAPs and UFOs are inexplicable is because we assume that they are navigating in our ordinary matter sector. All we are seeing are their cold plasma footprints in the ordinary matter earth’s environment.

There are also more sophisticated directed methods of motion. The dark plasma bodies of biological UFOs and UAPs may move by neutralizing or reversing their electric charge in specific parts of their body and/or redistributing the electric charges in their bodies. In this way, they can use electrical propulsion to move rapidly using Birkeland currents in the Dark Earth, like maglev trains (using magnetic levitation). This is much more sophisticated than how sharks use electric fields, which are generated by ocean currents carrying salt and moving in the magnetic field of the Earth, for orientation and navigation.

They could also suck in particles through their orifices in the direction of the motion and then spew out those particles from orifice located in the opposite direction. The suction generates a drift and the spewing out a thrust. This is similar to how squids move by using water for jet propulsion. They fill their mantle with water through small openings in their head, then eject the water through a funnel called the siphon to generate a thrust. This would be aided by magnetohydrodynamic currents in the plasma ocean or atmosphere. This is similar to how birds use air currents, and fish use ocean currents, to navigate. Additionally, they could use electro-mechanical jet propulsion using electric wind, plasma, or photonic thrusters.

Plasma lifeforms, representing UFOs and UAPs, could also ascend or descend by simply changing their density in the fluid-like plasma ocean. There would be side-effects from these movements. To descend, they must increase their density which means they would inadvertently initiate a dark ionization process. If they were near the earth’s surface they would unintentionally appear to ordinary sight. When ascending, they must reduce their density. Hence, they would inadvertently switch off the dark ionization process.

As noted in previous papers, plasma lifeforms have biological structures that resemble unicellular lifeforms. As such, they would behave like microbial organisms – although they could grow to extremely large sizes in the expansive plasma oceans, much larger than whales. They could to this by ingesting charged and neutral dark matter particles and lowering their

densities. If these dark plasma lifeforms generate ordinary plasma (through the dark ionization process) or emit dark photons that convert to ordinary photons (through kinetic mixing), they will be seen by radar and optical instruments. They would then be seen as huge objects majestically gliding across the ordinary matter Earth's atmosphere and be mistaken for "motherships" in a culturally-embellished report.

Some of these plasma lifeforms would therefore be similar to the hypothetical creatures that Carl Sagan described in his paper with Edwin Salpeter in 1976. They proposed that creatures resembling hot air balloons could exist in Jupiter's atmosphere. They based their hypothesis on the ecology of our oceans where different life forms exist at different levels. The Jovian equivalents of these were the "floaters" and "hunters." The floaters were giant gas bags which generated heat through their own metabolism, feeding off sunlight and free molecules. They moved by pumping out helium. The "hunters" were squid-like creatures which used jets of gas to propel themselves. The scientists calculated that the "hunter" variety could grow to be many kilometers across. Arthur C. Clarke imagined similar types of life forms in Jupiter's atmosphere.

When a group of plasma lifeforms move, just like birds and fishes, they will move showing swarm behavior. When travelling in swarms, the ordinary cold plasma sheaths around dark plasma life forms show up as colored orbs of light in the sky in patterned formations due to the effect of natural electromagnetic interactions between the orbs. Under the dark plasma hypothesis, plasma lifeforms are biologically *macroscopic* single-celled eukaryotic lifeforms. However, during certain situations (for e.g., in predatory pursuits or in life-threatening situations), plasma lifeforms (just like their ordinary matter biological counterparts) are expected to have the ability to congregate to form superorganisms (which would resemble multicellular lifeforms) temporarily. Hence, what would *appear* as a swarm of alien spacecraft could coalesce into what appears to be a single mothership.

Communication

The communication mechanisms that can be used by biological UFOs and UAPs would include the transmission and reception of thought-modulated electromagnetic and acoustic waves in plasma, directed thought-holograms and zipped plasma bubble-drives. These will be discussed in more detail in an upcoming paper by the author.

Since these plasma lifeforms are composed of dark plasma, i.e., self-interacting dark matter particles with a weak electric charge, we could expect weak dark electromagnetic waves from these lifeforms. More research and understanding of dark electromagnetism are necessary to construct dark (matter) radars or other relevant detectors to detect them. For e.g., if dark radio and microwave photons convert to ordinary radio or microwave photons (through kinetic mixing, as discussed above), it might open up a way for inter-sector communication and radar detection.

Plasma Holograms

In 2011 Japanese company Burton Inc. demonstrated a rudimentary system that created moving 3d images in mid-air with a series of rapidly-generated plasma dots from a laser which ionizes the air at those specific points. (The author calls this “plasmoid holography” as the laser produces plasmoids in the air.)

Since 2018, the U.S. Navy has been doing something similar. It has been producing lasers that generate plasma ‘UFOs’ in the atmosphere to act as decoys to confuse the enemy and deflect oncoming missiles. It has patented technology to create mid-air images to fool infrared and other sensors. An intense laser pulse can ionize the air producing a burst of glowing plasma. The Laser Induced Plasma Effects program uses single plasma bursts. A rapid series of such pluses can be modulated to transmit a spoken message or generate holographic 3d images. The Navy’s patent application document states, “There can be multiple laser systems mounted on the back of the air vehicle with each laser system generating a ‘ghost image’ such that there would appear to be multiple air vehicles present.”

Besides lifeforms, in the form of biological UFOs or UAPs, generating ordinary plasma in the ordinary matter Earth's atmosphere, dark plasma holograms may also be projected from the lowest energy Alpha Dark Earth. Ethereal plasma holograms of spaceships (resembling what we see on TV and movies) are crystallised in Alpha Dark Earth's plasmasphere from the trillions of dark electromagnetic waves, modulated by thoughts, broadcasted every day from the billions of dark plasma bodies linked to ordinary matter human bodies. Holographic projections from the collective consciousness of a community may therefore be imprinted in the plasmasphere and be seen by ordinary sight, if clothed with ordinary cold plasma envelopes. The specific mechanisms for a wide variety of possible dark plasma holograms will be discussed in an upcoming paper by the author.

Testing the Inter-Terrestrial Aliens Hypothesis (ITH)

Currently, the human species is regarded as the only intelligent life-form on Earth. Hence, the search for intelligent life has proceeded away from the Earth. However, the SETI Institute's program's objective in trying to find intelligent life outside Earth is to some extent misguided. The "aliens" that could be encountered and be considered "intelligent life" may not have to travel at or near light speed within our ordinary matter universe or have any technology to undertake intergalactic or interstellar travel within our observable universe. They could be co-inhabitants of the Earth-Moon system, which includes the visible ordinary matter Earth and Moon, as well as its dark matter counterparts corotating with them.

A SITI (Search for Inter-Terrestrial Intelligence) programme covering the Dark Earths may actually be more useful and cost-effective than a project on SETI (Search for Extra-Terrestrial Intelligence). If plasma life exists in Dark Earths, it may be "hiding in plain sight." It may be detectable only through rare, subtle, or non-standard interactions. Many dark matter experiments on Earth may have unintended benefits in that they are actually feeble and unintentional attempts at SITI. By combining SETI's expertise in signal detection with

the sensitivity of dark matter experiments, we can maximize our chances of discovering such life. These are some research and communication protocols we could develop to interact with inter-terrestrial intelligences.

Expanding SETI's Search Paradigm

Traditional SETI focuses on detecting electromagnetic signals (radio, optical, etc.) from distant star systems. However, if plasma life exists in dark matter biospheres on or near Earth, SETI should set up a new project called SITI to do the following:

- Broaden its search to include local, non-ordinary signals from within or near Earth.

- Develop protocols for "anomalous" signals that don't fit known astrophysical or technological sources, especially those that might be weak, transient, or non-standard (e.g., bursts, modulations, or "dark" electromagnetic phenomena).

- Collaborate intensively with teams conducting dark matter experiments to design new protocols for detecting intelligent dark matter signals as well as to co-analyse data received from what appears to be from sources within the earth and near-earth sources.

Collaborating With Dark Matter Detection Experiments

Dark matter experiments (e.g., XENON, LUX-ZEPLIN, DAMA/LIBRA, Super-Kamiokande, IceCube) are designed to detect rare interactions between dark matter particles and ordinary matter. These experiments could be adapted or analyzed for:

- Unusual, non-random event patterns: If plasma life in Dark Earths interacts with ordinary matter (even weakly), it might produce bursts, periodicities, or spatial clustering in detector data that differ from expected backgrounds.

- Correlations with UAP/UFO events: By cross-referencing times and locations of UAP sightings with detector anomalies, researchers could look for statistical associations.

- Search for “dark electromagnetic” biosignatures: Some dark matter models predict “dark photons” or other weakly interacting particles. If plasma life uses such particles for communication or metabolism, their emissions might be detectable as rare conversion events (e.g., dark photons converting to ordinary photons in strong and/or resonant magnetic fields).

- Shared anomaly databases: SETI and dark matter labs could create a joint database of unexplained events. These could include radio bursts, detector anomalies, unexplained electromagnetic pulses, that would be scrutinized for patterns or coincidences.

- Machine learning for cross-domain anomalies: AI could be trained to search for correlations between “weird” signals in SETI data and unexplained events in dark matter detectors.

Experimental Innovations for SETI, incorporating SITI

These innovations could be implemented:

- Signal modulation: Use distinctive, information-rich modulations (e.g., prime number sequences, mathematical constants) to distinguish artificial signals from noise.

- Global collaboration: Integrate SITI. with existing SETI and dark matter networks for real-time data sharing and anomaly analysis.

- Hybrid detectors: Design new instruments sensitive to both ordinary and hypothetical “dark” electromagnetic phenomena (e.g., using resonant cavities, superconducting sensors, or quantum sensors).

- Localized experiments: Place dark matter detectors in locations with frequent UAP/UFO reports or in high-altitude/space environments to maximize the chance of interaction with plasma life.

Theoretical Conceptualizations and Simulations

Theoretical and simulations could be conducted to discover the following:

- Modeling plasma life's possible biosignatures and communications: Theorists can simulate how plasma-based life in dark matter might interact with ordinary matter, what signals it could produce, and how these would appear in both SETI and dark matter data.

- Predicting "communication" attempts: If plasma life attempts to communicate, it might use frequencies or particles not covered by traditional SETI. Theoretical work can guide where to look. Based on the mapping in this book, the highest probability of interactions would be in the CTS: the higher regions of the crust, the troposphere and the lower regions of the stratosphere.

Public and Interdisciplinary Collaboration

To engage the public and expand the spectrum of detection opportunities, we can do the following:

- Citizen science: Encourage the public to report UAP/UFO events with precise timing and location, which can be cross-checked with dark matter detector data.

- Interdisciplinary conferences: Bring together SETI, dark matter physicists, plasma physicists, and consciousness researchers to share findings and brainstorm new detection strategies.

Summary of SETI-Dark Matter Lab Collaboration Initiatives

Approach	***SETI's Role***	***Dark Matter Lab's Role***	***Joint Benefit***
Broaden search paradigm	Look for local anomalies	Share detector anomalies	Find cross-domain patterns
Data sharing	Provide radio/optical data	Provide particle event data	Correlate events, boost discovery
Hybrid detectors	Develop new sensors	Test for dark EM signals	Detect new forms of communication
Theoretical modeling	Predict signal types	Simulate interaction events	Guide experimental focus
Public engagement	Collect UAP reports	Time-stamp detector events	Increase data, improve correlations

Table 1: SETI and DM Detector Collaboration Ideas

Specific Investigations based on Kinetic Mixing

SETI's current strategy for contacting aliens in other stellar systems involves transmitting and listening for signals across various electromagnetic channels, such as radio, optical, and microwave frequencies. The approach is grounded in the idea that technologically advanced civilizations may use similar means for interstellar communication. SETI projects often focus on sending powerful, well-structured signals toward likely star systems and scanning the sky for unusual or non-random patterns in incoming signals that could indicate an intelligent origin. A similar strategy can be used to contact inter-terrestrials inhabiting Dark Earths, by relying on kinetic mixing.

Kinetic mixing is a theoretical process in which ordinary photons (the carriers of electromagnetic signals, including radio waves) can convert into dark photons (hypothetical carriers of "dark electromagnetism" in the dark sector), and vice versa, in the presence of strong or resonant magnetic fields. This means that a signal sent as ordinary electromagnetic radiation (radio, microwave, optical, etc.) could, in the right environment, partially convert into dark photons. These dark photons could then propagate through the dark sector, potentially to be received by dark plasma lifeforms or technology in the Dark Earths. Conversely, signals

generated by dark plasma lifeforms using dark photons could convert back into ordinary photons, making them detectable by our instruments.

Kinetic mixing and related mechanisms make it possible to design a SITI project that uses radio, optical, microwave, and even plasma or neutrino channels to search for intelligent signals from plasma life in Dark Earths. For e.g., if both sides (ordinary and dark sector) have the means to generate and detect photons or dark photons, they could, in principle, exchange information. Radio, optical, and microwave signals could, via kinetic mixing, be used as channels for inter-sector communication. For example, a radio transmission from Earth could convert to a dark radio wave, travel through the dark sector, and be received by a dark plasma lifeform. The reverse is also possible. The information can be encoded in the frequency, amplitude, or phase of the electromagnetic wave, just as in ordinary radio or optical communication. If the conversion process preserves this modulation, complex messages could be sent.

Microwave signals are commonly used in both SETI and radar. Kinetic mixing could allow for the conversion of microwaves to dark microwaves and back, especially in environments with strong electromagnetic fields (e.g., near certain detectors or natural geophysical anomalies). Terahertz waves are less absorbed by the atmosphere and could be used for “deep” communication through both ordinary and dark matter.

Just as radio photons can undergo kinetic mixing, so can photons in the optical or infrared range. This means that laser pulses or modulated light beams could, in principle, be used for inter-sector signaling. If dark plasma life uses “dark light” (dark photons), some of these could convert to ordinary photons in the presence of strong magnetic fields or specific materials, making optical SETI (OSETI) a candidate for SITI experiments. This will allow for optical/infrared communication.

This means dark plasma lifeforms could potentially receive, respond to, or even initiate communication using these converted signals. Conversely, dark radio signals could convert

back into ordinary photons, making them detectable by our instruments. This mechanism provides a physical bridge for information transfer between our sector and the dark sector, making SITI a scientifically plausible endeavor.

Experimental Possibilities

These are specific equipment and programs that may be required to detect intelligent dark plasma life:

- Hybrid detectors: Develop radio, optical, and microwave transmitters and receivers designed to operate in environments (e.g., strong or resonant magnetic fields, superconducting cavities) that maximize the probability of photon to dark photon conversion, making it possible to “listen” for dark sector signals.

- Synchronized transmissions: Coordinating transmissions with dark matter detector “listening” windows could increase the chance of detecting responses and correlated anomalies from the dark sector.

- Other Channels Enabled by Similar Mechanisms

    - Plasma wave communication: In plasma environments (such as the ionosphere or plasmaspheres), both ordinary and dark plasma lifeforms could use magnetohydrodynamic (MHD) waves or Alfvén waves for communication. These could, in theory, couple across sectors via kinetic mixing or shared magnetic fields.

    - Neutrino communication: Some dark matter models predict interactions between neutrinos and dark sector particles. Neutrino detectors (like IceCube) could be adapted to look for anomalous bursts or modulations that might indicate intelligent signaling from dark plasma life.

    - Gravitational waves: While extremely weak, advanced civilizations might use modulated gravitational signals, which could, in principle, interact with both ordinary and dark matter.

- Fifth-force interactions: If a new short-range force (as hypothesized and discussed earlier for dark matter coupling) exists, it could be used for signaling between sectors, especially at close range or in laboratory settings.

Summary of Ordinary to Dark Communication Channels

Channel Type	***Ordinary Sector Example***	***Dark Sector Analog***	***Conversion Mechanism***
Radio/ Microwave	SETI radio transmissions	Dark radio waves	Kinetic mixing
Optical/ Infrared	Laser pulses, OSETI	Dark light	Kinetic mixing
Neutrino	Neutrino bursts	Dark sector neutrinos	Weak interactions
Plasma/ Acoustic	MHD/Alfvén waves	Dark plasma waves	Magnetic field coupling
Gravitational/ Fifth	Gravitational wave signals	Dark sector gravity/fifth	Shared spacetime/fifth force

Table 2: Summary - Communication Channels for SITI.

Dark photons, via kinetic mixing, provide a theoretically sound and technologically plausible bridge for communication between our world and the dark sector. This enables the possibility of the *Search for Inter-Terrestrial Intelligence* (SITI) using radio, optical, microwave, and plasma wave channels to search for intelligent signals from plasma life in Dark Earths.

Implications

Access to each of these Dark Earths in different sectors gives us access to the infinite universes that they inhabit, and the diverse types of alien lifeforms that could be encountered. Considering the huge volume of even the lowest energy Dark Earth (being the size of Jupiter) and the multiple biospheres in various shells, we can expect an enormous diversity of UAPs or UFOs, including biological UFOs and though-modulated holograms. The civilizations that are thriving in Earth's dark plasmaspheres have been here longer than the human species in the ordinary matter Earth. If they are intelligent lifeforms, it would be reasonable to conclude that they would be highly

advanced in technology, including communications, transportation and advanced computing. They would have their own governments, societies, cultures and technologies. They would be concerned about what is happening on the ordinary matter earth. However, they would be just as helpless as us in crossing energy and other barriers from one sector to another. Hence, they would only be able to intervene sporadically and in limited ways.

When a person is falling asleep, the locus of consciousness shifts to the lowest energy alpha dark plasma body. Conversely, when waking up, it shifts back to the ordinary matter body. At these times, sightings of dark plasma UFOs can be expected, even if no ordinary plasma is generated. People who practice regular meditation would have easier access to the sensory system of the alpha dark plasma body as they ingest and accumulate dark matter particles in their ordinary matter bodies. Hence, they would have a higher probability of seeing these phenomena using a hypothesized "dark sight," operating in the dark sectors. UFO hunters should probably take up meditation as this will increase their chances of experiencing more sightings to enable them to study UAPs or UFOs more closely.

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